

In the Claims:

1 (Currently Amended). An optical arrangement, comprising:

a light source that emits radiation,
a mount,
an optical element fastened in said mount,
wherein said optical element is acted on by said radiation such that a heat supply results
from said radiation that lacks symmetry corresponding to the shape of said optical
element, and
a connecting structure between said mount and said optical element ~~and said mount~~,
having a symmetry characteristic that substantially does not correspond to the shape of
the optical element.

2 (Previously Presented). An optical arrangement, comprising:

a light source that emits radiation,
a mount,
an optical element fastened in said mount,
wherein said optical element is acted on by said radiation such that heat that results from
said radiation lacks symmetry corresponding to the shape of said optical element, and
a single- or multi-part thermally conducting element arranged in operative connection
with said optical element and said mount and having a form of heat transport that effects
an at least partial compensation of the asymmetry of temperature distribution in said
optical element.

3.(Previously Amended) A projection exposure system for microlithography, comprising:

an optical element that is heated by radiation in a manner that lacks rotational symmetry,
and
a cooling system for said optical element that lacks rotational symmetry, said cooling
system including passive thermally conducting elements that effect cooling, in which said
thermally conducting elements comprise adjustable portions.

4.(Previously Amended) A projection exposure system for microlithography, comprising
an optical element that is heated by radiation in a manner that lacks rotational symmetry,
and
at least one passively thermally conducting part arranged in thermal contact with said
optical element, which part covers a portion of the cross section of said optical element
which is not exposed to said radiation, and which part reduces temperature gradients in
said optical element, in which said at least one passive thermally conducting part of a
thermal conductor in thermal contact with said optical element comprises a plurality of
different materials and in which said at least one passive thermally conducting part of a
thermal conductor in thermal contact with said optical element is at least partially
adjustable.

5 (Previously Presented). The optical arrangement according to claim 1, in which said
optical element comprises a transmitting element.

6 (Previously Presented). The optical arrangement according to claim 5, in which said
transmitting element comprises a lens.

7 (Previously Presented). The optical arrangement according to claim 2, in which said
optical element comprises a transmitting element.

8 (Previously Presented). The optical arrangement according to claim 7, in which said

transmitting element comprises a lens.

9 (Previously Presented). The projection exposure system according to claim 3, in which said optical element comprises a transmitting element.

10 (Previously Presented). The projection exposure system according to claim 9, in which said transmitting element comprises a lens.

11 (Previously Presented). The projection exposure system according to claim 4, in which said optical element comprises a transmitting element.

12 (Previously Presented). The projection exposure system according to claim 11, in which said transmitting element comprises a lens.

13 (Previously Presented). The optical arrangement according to claim 1, in which said optical element comprises a mirror.

14 (Previously Presented). The optical arrangement according to claim 2, in which said optical element comprises a mirror.

15 (Previously Presented). The projection exposure system according to claim 3, in which said optical element comprises a mirror.

16 (Previously Presented). The projection exposure system according to claim 4, in which said optical element comprises a mirror.

17 (Previously Presented). The optical arrangement according to claim 1, having a slit-shaped image field.

18 (Previously Presented). The optical arrangement according to claim 2, having a slit-shaped image field.

19 (Previously Presented). The projection exposure system according to claim 3, having a slit-shaped image field.

- 20 (Previously Presented). The projection exposure system according to claim 4, having a slit-shaped image field.
- 21 (Previously Presented). The optical arrangement according to claim 5, in which said optical element is arranged near a field plane.
- 22 (Previously Presented). The optical arrangement according to claim 7, in which said optical element is arranged near a field plane.
- 23 (Previously Presented). The projection exposure system according to claim 9, in which said optical element is arranged near a field plane.
- 24 (Previously Presented). The projection exposure system according to claim 11, in which said optical element is arranged near a field plane.
- 25 (Previously Presented). The optical arrangement according to claim 1, further comprising a reticle, the illumination of which lacks rotational symmetry.
- 26 (Previously Presented). The optical arrangement according to claim 25, in which said reticle illumination consists of off-axis, dipole or quadrupole illumination.
- 27 (Previously Presented). The optical arrangement according to claim 2, further comprising a reticle, the illumination of which lacks rotational symmetry.
- 28 (Previously Presented). The optical arrangement according to claim 27, in which said reticle illumination consists of off-axis, dipole or quadrupole illumination type.
- 29 (Previously Presented). The projection exposure system according claim 3, further comprising a reticle, the illumination of which lacks rotational symmetry.
- 30 (Previously Presented). The projection exposure system according to claim 29, in which said reticle illumination consists of off-axis, dipole or quadrupole illumination type.

31 (Previously Presented). The projection exposure system according to claim 29, in which
said optical element is arranged near a pupil plane.

32 (Previously Presented). The projection exposure system according to claim 4, further
comprising a reticle, the illumination of which lacks rotational symmetry.

33 (Previously Presented). The projection exposure system according to claim 32, in which
said reticle illumination consists of off-axis, dipole or quadrupole illumination type.

34 (Previously Presented). The projection exposure system according to claim 32, in which
said optical element is arranged near a pupil plane.

35 (Previously Presented). The optical arrangement according to claim 1, in which said
connecting structure comprises portions of different materials.

36 (Previously Presented). An optical arrangement comprising:
a light source that emits radiation,
a mount,
an optical element fastened to said mount,
wherein said optical element is acted on by said radiation such that heat that results from
said radiation lacks symmetry corresponding to the shape of said optical element, and
a single- or multi-part passive thermally conducting element arranged in operative
connection with said optical element and said mount and having a form of heat transport
that effects an at least partial compensation of the asymmetry of temperature distribution
in said optical element,
wherein said passive thermally conducting element comprises an assembly of portions of
different material.

37 (Cancelled)

38.(Cancelled)

39 (Previously Presented). The optical arrangement according to claim 1, in which said connecting structure comprises adjustable portions.

40 (Previously Presented). The optical arrangement according to claim 2, in which said thermally conducting element is adjustable.

41 (Previously Presented). The projection exposure system according to claim 3, in which said thermally conducting elements comprise adjustable portions.

42.(Cancelled)

43.(Cancelled)

44.(Cancelled)

45. (New) A system comprising:
an optical element that is heated by radiation in a manner that lacks rotational symmetry,
and
a cooling system for said optical element that lacks rotational symmetry, said cooling system including passive thermally conducting devices that effect cooling,
wherein said passive thermally conducting devices comprise portions of different material.